Oyster Management in Louisiana

MS Governor's Oyster Council

Biloxi, MS April 21, 2015

OVERVIEW

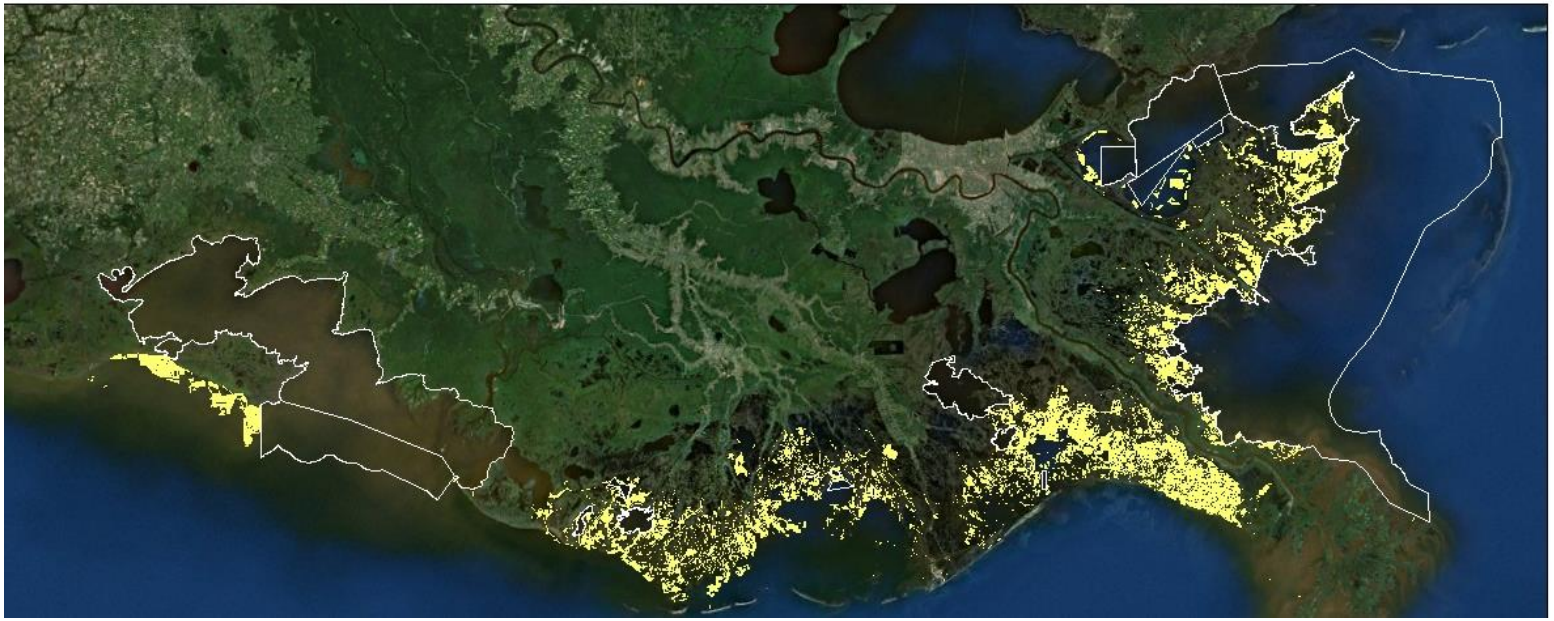
- History of the public – private partnership
- Management of private lease
- Management of public grounds

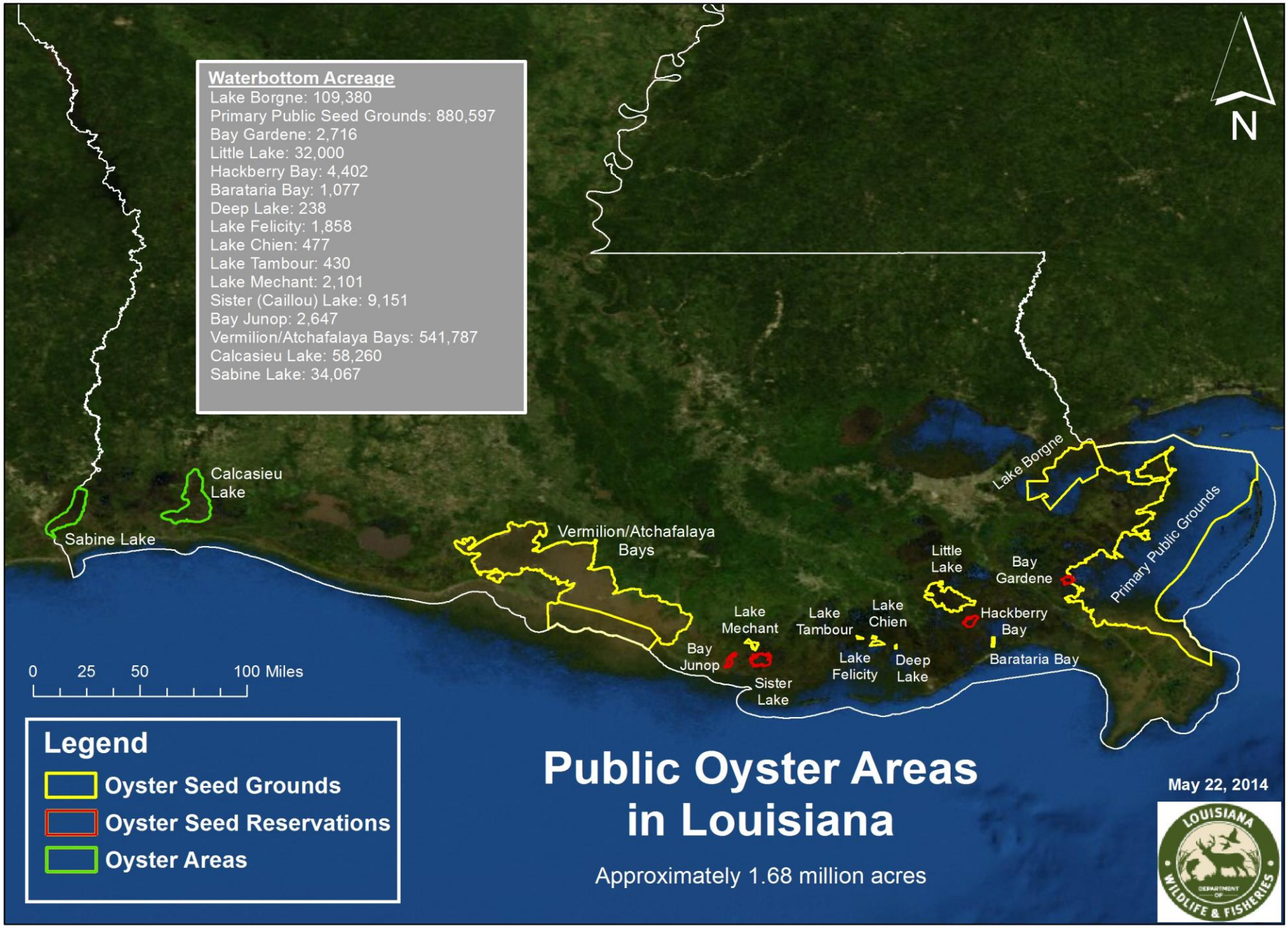
History of Public – Private Partnership

- Pre-1902 parish governments issued leases
- First state-issued lease in 1902
- Attempts to protect traditional “natural reefs”
- Extensive effort to promote private investment (leasing)
- Nearly 400,000 acres under lease
- Approximately 1.68 million acres of public areas
- Louisiana & Mississippi oyster history intertwined

Private Lease Management

- Oysters and water bottom managed by the leaseholder
- Recent allowance for off-bottom aquaculture
- Lease contract is managed by LDWF (Lease Survey Section)
- State protection of oyster resources on leases



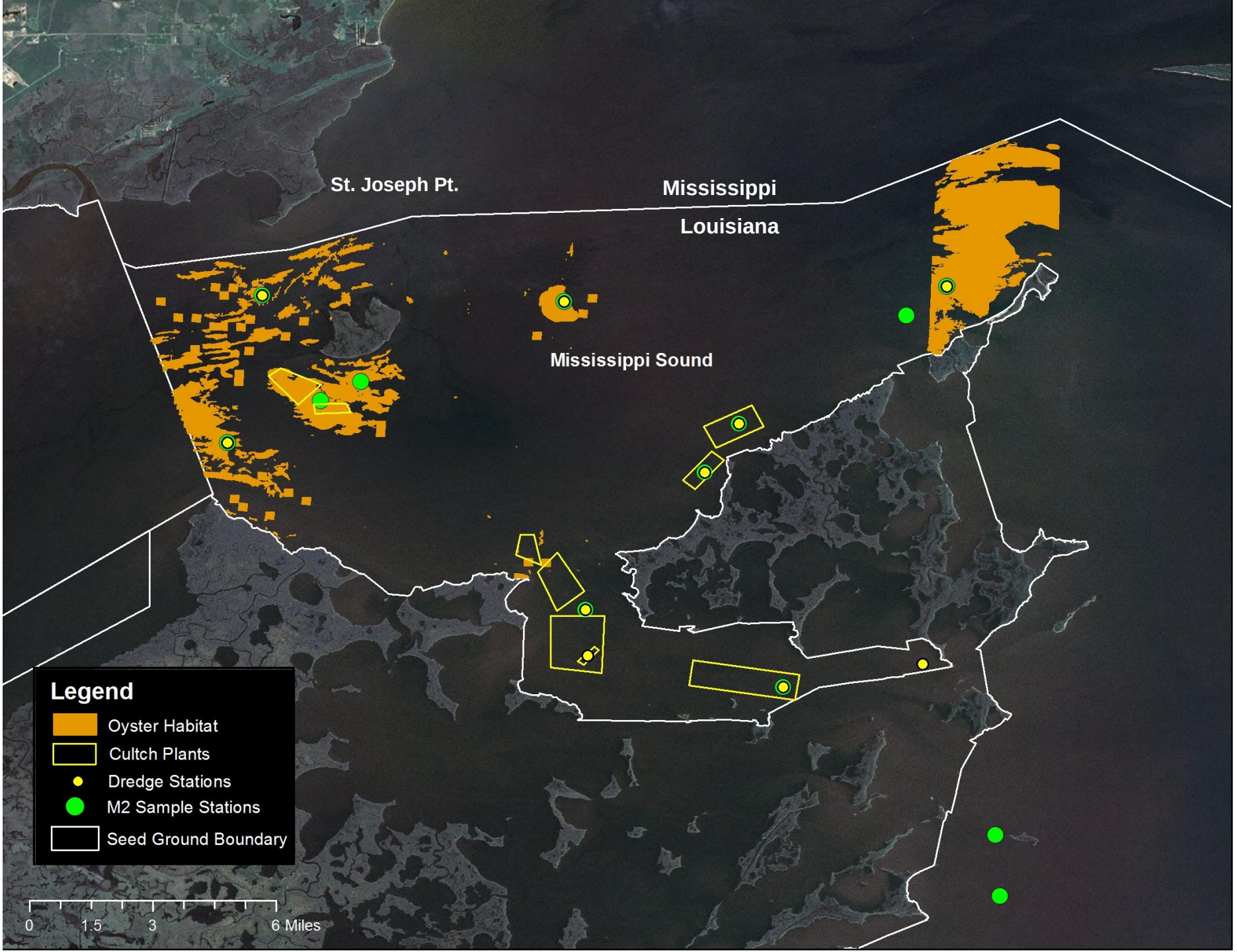

Waterbottom Acreage
Lake Borgne: 109,380
Primary Public Seed Grounds: 880,597
Bay Gardene: 2,716
Little Lake: 32,000
Hackberry Bay: 4,402
Barataria Bay: 1,077
Deep Lake: 238
Lake Felicity: 1,858
Lake Chien: 477
Lake Tambour: 430
Lake Mechant: 2,101
Sister (Caillou) Lake: 9,151
Bay Junop: 2,647
Vermilion/Atchafalaya Bays: 541,787
Calcasieu Lake: 58,260
Sabine Lake: 34,067
N
Calcasieu Lake
Sabine Lake
Vermilion/Atchafalaya Bays
Lake Borgne
Primary Public Grounds
Little Lake
Bay Gardene
Hackberry Bay
Barataria Bay
Lake Chien
Lake Tambour
Lake Mechant
Bay Junop
Lake Felicity
Deep Lake
Sister Lake
0 25 50 100 Miles
Legend
Oyster Seed Grounds
Oyster Seed Reservations
Oyster Areas
Public Oyster Areas in Louisiana
Approximately 1.68 million acres
May 22, 2014
LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

PUBLIC AREAS - MANAGEMENT GOALS

- Manage, conserve, and promote the wise use of the public oyster resource
- Provide seed oysters (< 3”) for transplant to leases
- Provide sack oysters to be taken directly to market

How?

- Harvest restrictions/regulations
- Seasonal framework
- Enforcement
- **Biological sampling (oyster stock assessment)**
- **Shell Budget Modelling**
- **Reef mapping**
- **Habitat rehabilitation and enhancement**


St. Joseph Pt.
Mississippi
Louisiana
Mississippi Sound
Legend
Oyster Habitat
Cultch Plants
Dredge Stations
M2 Sample Stations
Seed Ground Boundary
0
1.5
3
6 Miles

Shell Budget Model

- Developed by Univ. of New Orleans (Soniat)
- “No net loss of shell”
- Data inputs (starting reef mass, oyster #, size, etc.)
- Output (harvest threshold, ending reef mass)
- Still in testing phase
- Results have been in the direction anticipated
- **Values:**
  - **Provides a harvest threshold**
  - **Helps conserve cultch**
  - **Helps guide cultch planting efforts**
  - **Helps meet sustainability certification criteria**

Habitat Rehab and Enhancement Projects

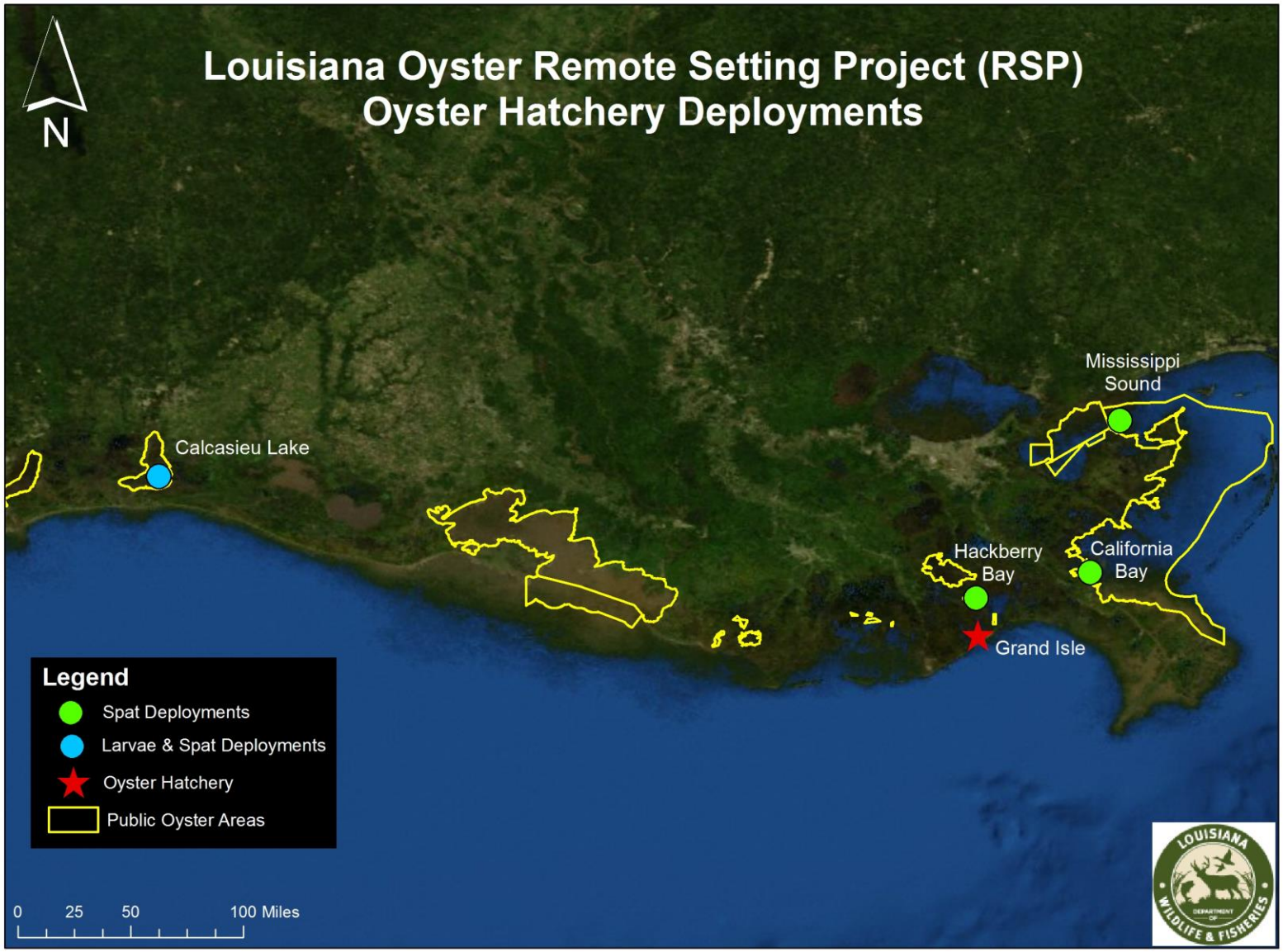
- Cultch planting (since 1917)
- Oyster hatchery and remote-setting

Cultch Planting

- "*Build it, and they will come*"
- Main requirement: Salinity over hard bottom
- Other considerations
  - Freshwater inputs
  - Coastal restoration projects
  - Oil and gas projects
  - Navigation interests
  - Industry needs
  - Water depth ($)
  - Larval availability
- Cost:Benefit

Hatchery-Based Rehabilitation

2011 - 2014



Summary

- Successful public-private partnership
- Private leases managed privately, with state assistance
- Complex management program on public grounds
- Cultch planting has long history of success
- New tools are shell budget and hatchery program

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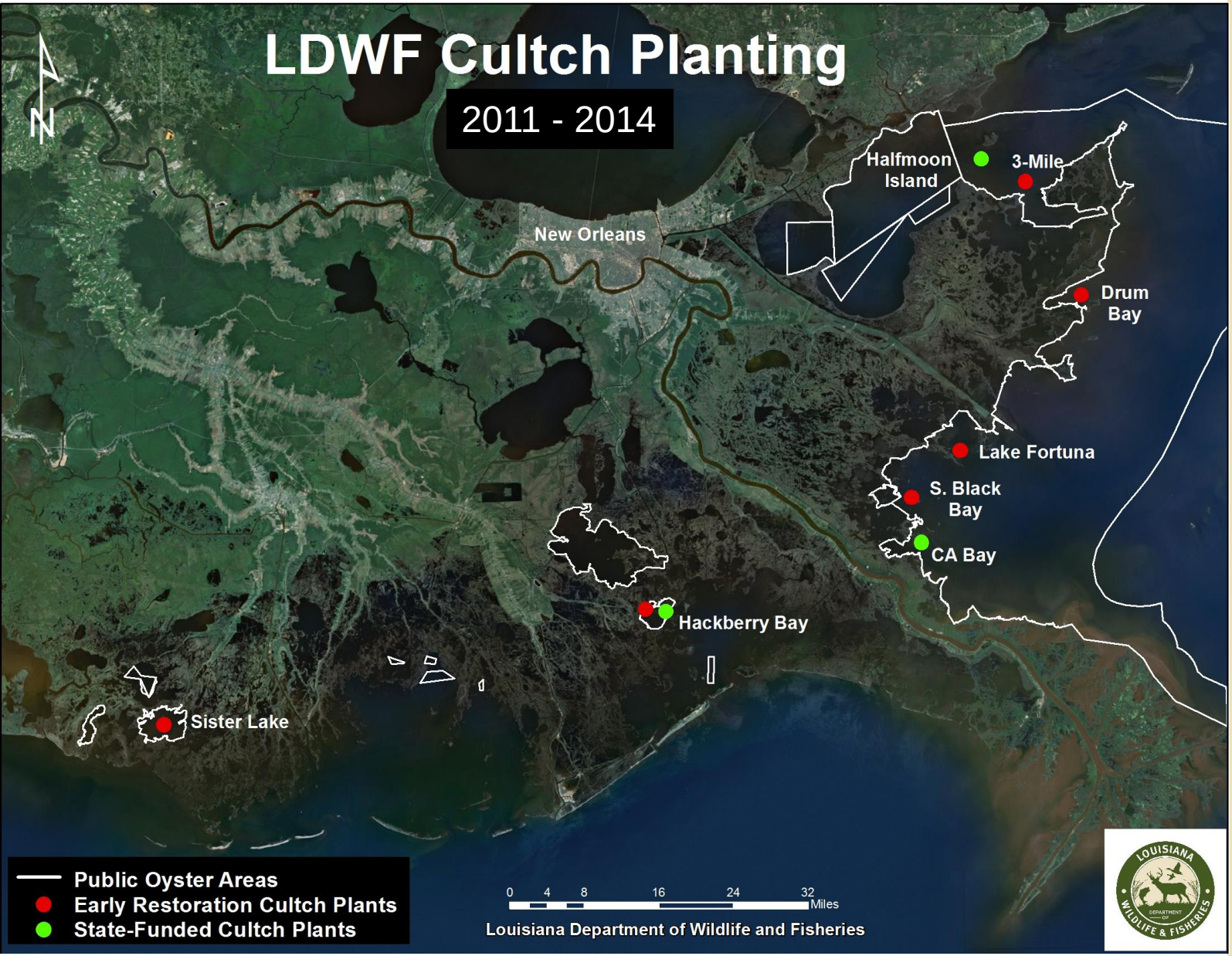
History of Cultch Planting by LDWF

- Goal: increase commercial oyster availability
- Started in 1917
- 140 total projects
- Over 1.8 million cubic yards planted
- Covered over 32,000 acres
- Spent over $23M since 2004
- Examples:

Year	Location	Cultch Type	Cubic Yards	Acreage	Yd^3/Acre	Cost	Price/Yd^3	Cost/Acre
1917	Sister Lake	oyster	2,243.0	75	29.9	$1,287.01	$0.57	$17.16
1941	Sister Lake	oyster	6,913.6	230	30.1	$10,000.00	$1.45	$43.48
1950	Lake Felicity	clam	2,356.4	78	30.2	$9,713.94	$4.12	$124.54
1975	Bel La Pass	clam	11,850.0	237	50.0	$76,446.28	$6.45	$322.56
1994	Sister Lake	oyster	42,576.1	306	139.1	$891,118.61	$20.93	$2,912.15
2004	Hackberry Bay	concrete	2,322.40	10	232.2	$85,835.90	$36.96	$8,583.59
2014	Hackberry Bay	Limestone	3,760.61	30	125.4	$246,041.67	$65.43	$8,201.39


LDWF Cultch Planting
2011 - 2014
N
Halfmoon Island
3-Mile
New Orleans
Drum Bay
Lake Fortuna
S. Black Bay
CA Bay
Hackberry Bay
Sister Lake
Public Oyster Areas
Early Restoration Cultch Plants
State-Funded Cultch Plants
0 4 8 16 24 32
Miles
Louisiana Department of Wildlife and Fisheries